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SPONTANEOUS SYMMETRY POLE BREAKING OF ITS GAUGE VARIANT

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ABSTRACT

Theoretical presentation of newer clone atom i.e. zee Sugato-Higgs-Boson atom for the SM with the photon-atom (p-a) collision with the newer invention. It has to be the integrated with the theory of spontaneous symmetry pole braking with its invariant gauge dimension α,β,γ zee Sugato-Higgs-Boson with it analog of mimic clone in the SM. The Maxi can Cap with pair ring has to be discusses in these paper. The gauge invariants in D-wave cooling state are also in this paper.

KEYWORDS: Gauge Invariant, Zee Sugato-Higgs-Boson, α,β,γ, Zee Sugato-Higgs-Boson

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Original Article

INTRODUCTION

The Standard model (SM) of elementary particle physics is remarkable invention of symmetry breaking into pole invariant gauge dimension of new particle physics with SSBP model [1] with its dynamic annihilation into the vanishing field electro magnate has to be come to be spontaneous pole breaking into its extrapolation and interpolation with generate mother atom and clone and its new invention zee Sugato- Higgs- Boson onto its α,β,γ zee Sugato-Higgs –Boson gauge invariant.

Gauge Dimension Lie Group

The state generation of Hamilton of a particle moving non- relativistic ally in N – dimensional Euclidian space under the action of conservative central force is symmetry under Lie group larger than SO(N)[2].The group rotation with have a dynamic annihilation into the Lie group function. The dynamic gauge with higher rotational transfer function into the two state function of Lie group have to be local to global gauge invariant [2] and strong interaction into the symmetry [2] into the massive gauge field have to be turned into pole dynamic rotation, where Lie group broken, it has to symmetry into a rotational invariant to be extrapolate in massive gauge with two dynamic invariance have a local gauge invariant [3] of broken symmetry and rotational invariant broken symmetry which Lie group will have a invariant annihilating rotation with two state function extrapolate rotation with massive mass less gauge and interpolate state function under the D-wave analog with symmetry pair rotation acquire mass into the vanishing electro weak interaction[3].In the state function of cooled trap with electrically dielectric zero spin state rotation. The theorem of Goldstone, Salam and Weinberg [4,5] is straight forward and thus the propagation of the field Φ_2 which is "orthogonal" to Φ_1 has a pole at q=0 which is isolated. The vacuum polarization loop $\Pi_{\mu\nu}$ for the field A_μ is the lowest order perturbation theory about self – consistent vacuum [4, 5]. The polarization of Lie being transfer with two state accusation of perturbated ion have to the gauge Yang-Mill is a phase 0 to 180^0 rotation in the two duel pseudo kanons into the transfer function of Φ_1 superposition to Yang-Mill invariant a pseudo scalar vector of rotation of mass less gauge. The invariant gauge with to the SSPB rotation

with a line phase transfer to vacuum expect ion in the ions interpretation, which gauge lie with a rotation $(\mu^{+})^{+}$ and $(\mu^{++})^{++}$ pair. The invariant have to be a mass. The gauge invariant into a oscillating rotation with two dynamic vector, where as anti-pair electrolyse electro generator have a mass rotational zee Sugato-Higgs-Boson in kanons invariant transformation into the two pole dynamic gauge.

Essentially it is the presence of mass less collective mode; now known by the generic name of Nambu Goldstone (NG) [6] that saves charge conservation on group invariance.

The Bogoliubov-Valatin (BV) quasi particles are described by the equation [6].

$E\Psi_{p,+}=\varepsilon_p\Psi_{p,+}+\Delta\Psi_{-p,-}{}^{+}$

$E\Psi^{+}{}_{-p,-}=-\varepsilon_p\Psi^{+}{}_{-p,-}+\Delta\Psi_{p,+}$

$E=\sqrt{\varepsilon_p{}^2+\Delta^2}$

Where $\Psi_{p,+}$ and $\Psi_{-p,-}{}^{+}$ are the wave function for an electron and a hole of momentum p and spin + or - , ε_p is the kinetic energy relative to the Fermi energy and 2Δ is the energy gap. In terms of spin like metrics τ_i , the corresponding Hamiltonian and the charge current are

$H_0=\varepsilon_p\Psi^{+}\tau_3\Psi+\Delta\Psi^{+}\tau_1\Psi\ ,\ \rho_0=\Psi^{+}\tau_3\Psi\ , J_0=\Psi^{+}\left(\frac{P}{m}\right)\Psi$ [6]

The one parameter group of unitary transformation appearing in Stone's theorem can be consider the invariant of ion in the electron and hole translation into the pair parity of mimic with rotational zee Sugato-Higgs-Boson as a representation of the group of translation βΔΨ is the translation invariant which is the function $\rightarrow \beta_{i,j,\alpha}\,\Delta\Psi_{j,i,\alpha^{+}}$ of the real line into itself. On the other hand the pole rotation into gauge invariant with ground unification of magnetic symmetry breaking with two pole with anti-quasi ion rotation as the phase annihilation $+\left(\mu_{i,j,\alpha,\beta,\gamma}{}^{+}\right)^{+}$ ion of mass generate probability of zee Sugato-Higgs-Boson as a vacuum expectation with the dynamic phase as the invariant rotational gauge have a function $e^{i\mu_{\alpha,\beta,\gamma,t}}$ under the integral sign where α,β,γ, are zee α Sugato-Higgs-Boson, zee β Sugato-Higgs-Boson, zee γ Sugato-Higgs-Boson have for every fixed value of μ^{+} and rotational μ^{++} as a character of these group, that is represent of complex pseudo vacuum expectation value of modulus 1.

This gives rise to the problem quasi-dynamic rotation with analogous representation of SSPB pole orientation with the unitary transformation of more general abstract group of Sugato-Abelian [3] group G which is locally a bicompact topological group where "locally bicompact" mean of every element of Sugato-Abelian group with a pair of pole parity (positive and negative) [3] charge operator has a neighbourhood on which Borel covering theorem is valid. A profound study of these group R was possible by the important discovery by A.HAAR affirming the existence of on R of a left invariant measure $\mu^{+}(E)$ and a semi-quasi rotation on the right invariant measure$\mu^{++}(E_1)$. So as the gauge lie invariant

$\mu^{+}(\alpha).\mathrm{E}(\beta).\mathrm{E}(\gamma)=\mu^{++}(\alpha).\mathrm{E}(\beta).\mathrm{E}(\gamma)$

Where E stands as Abelian group ++, -- rotation of pair parity with two rotation of Sugato-Higgs pulse phase ion equation in the Local→Global→Quasi→Interpolation & Extrapolation transformation.

Spontaneous Pole Breaking of Global U (1) &U$(1)'$ Pair Symmetry

The discussion of global symmetry breaking will be centred on a simple model Φ^4 theory with a U (1) symmetry with the pair parity U$(1)'$symmetry pair. This simple model will provide insight into the pair analogies with local gauge symmetry breaking, which will also be considered for the U (1) &U$(1)'$ model. U (1) &U$(1)'$ the pair are an internal symmetry, which describes for example conservation of electric pair charges.

The U(1) transformation of a complex field Φ^+ that will be considered here looks like.

$$\Phi^+(x) \rightarrow e^{-i\alpha^+}\Phi(x)$$

and the other U$(1)'$ pair transformation of another complex field Φ^{++} that will be considered here another pair parity which looks like

$$\Phi^{++}(x) \rightarrow e^{-i\alpha^{++}}\Phi(x)$$

Where α^+ & α^{++} are a constant and hence a global parameter, independent of space-time. The Lagrangian complex $(\Phi^+)^4$ & $(\Phi^{++})^4$ theory is invariant under this global U (1) &U$(1)'$ the pair symmetry. It is

L=$\delta_\mu(\Phi^+)^+\delta\mu_\Phi$ + $\delta_\mu(\Phi^{++})^+\delta\mu_\Phi$-v$(\Phi)^+$- v$(\Phi)^{++}$

In this theory without symmetry breaking the second term is the mass term, with $\mu^2 > 0$ and the potential

$$v(\Phi)=-\frac{\mu}{4\lambda_1}-\frac{\mu}{4\lambda_2}-\mu^2{\Phi_R}^2+\sqrt{2\left(\frac{\lambda_1\sim\lambda_2}{2}\right)}$$

Has the form of a pair parabola in symmetry pair this is sketched in figure 1 there is a unique vacuum that is symmetric perturbation around the ground state. The ground state is symmetric under the duel U (1) &U$(1)'$ phase rotation. The vacuum is with a synchronized break of pulse onto the atom creates to a supper symmetry clone in the transfer energy. The vacuum is with a synchronized transfer Sugato-Higgs pulse to generate vacuum itself as duel transfer symmetry. To transfer dynamic a half spin vector to generate isospin null zero pseudo transfer and a null complex pseudo transfer a non-regulating Higgs-Boson vacuum is non-regular continuous symmetry[3].The mass can be seen as imaginary; the field is tachyonic. A tachyonic field is however unstable and will condense into a stable state. The potential has the shape of a Mexican hat with a pair line of pair ring. The potential has the shape of Mexican has as sketched in figure 2. The local maximum of the potential at $\Phi^+ = \Phi^{++} = 0$ is an unstable point associated with the tachyonic field. The field will condense into a stable ground state. Rather than two scalars with identical masses, there is one (Φ_R) with mass squared $2\mu^2$ and that is mass lessΦ_1, there is a remaining discrete symmetry.

$$\Phi_R \rightarrow \Phi_R\ ,\ \Phi_1 \rightarrow \Phi_1$$

This can call the pair parity.

The minima of this system are thus degenerate there are multiple states with the same vacuum energy. The different orientation of these states is comparable to the direction of alignments of the spins in the ferromagnet [1] in SSPB. These ground states are asymmetric under U (1) &U$(1)'$ pair rotation, although U (1) &U$(1)'$ being vacuum expectation will be rotates with different orientation. For spontaneous symmetry pole breaking in the rod and a Ferromagnetic piece of rod is with its standard moment an interpolate generate into the pieces by repeated increasing

pressure with invariant dynamic moment and the annihilated gauge dynamic moment generated into the fibber frame of the Ferro magnetic pieces into D wave function into LT to CT condition. The ground state is Lagrangian with vacuum expectation value. The equation6 [3] shows that the mass term for the η_1 &η_2 of the two covalent field, the mass less field is the Goldstone-Boson have to be new field of orientation of two pair pseudo zee Sugato-Higgs-boson scalar vacuum expectation field, where the adjacent state of the energy function are not to be any resistance in the same. From the figure (2) it is clear that there is not a unique ground state for the system, there is a set of degenerate vacuum lying on a ring in the complex plane.

The values of the fields in the ground states can be found in vary standard procedure by setting the derivative of the potential zero. For the case $\mu^2 > 0$, the minimum is found to be $\Phi^+ = \Phi^{++} = 0$ or more precisely the vacuum $< \Phi^+ >$, $< \Phi^{++} >$ is zero.

For the case $\mu^2 > 0$

The minimum is found to be at

$\Phi^+ = \Phi^{++} = 0$

As, is expected on inspection of the sketch of the parabola-shaped potential. Since in the unbroken case the ground state is that at $\Phi^+ = \Phi^{++} = 0$ perturb ting around this ground are expressed in small value of the field Φ^+ and coherent pair fieldΦ^{++}. The situation is however different if the symmetry is broken in the ground state.

Where $\mu^2 < 0$ the minimum of v occurs

Classically for

$$|\Phi^+| = \sqrt{-\frac{\mu^2}{2\lambda}}$$

$$|\Phi^{++}| = \sqrt{-\frac{\mu^2}{2\lambda}}$$

Describe a local maximum rather than a minimum. The minima are found by

$$v(\Phi) = -\frac{\mu}{4\lambda_1} - \frac{\mu}{4\lambda_2} - \mu^2 {\Phi_R}^2 + \sqrt{2\left(\frac{\lambda_1 \sim \lambda_2}{2}\right)}$$

$$< \Phi > \Phi_R\left({\Phi_R}^2 + {\Phi_R}^2\right) + \left(\frac{\lambda_1 \sim \lambda_2}{2}\right)\left(\left({\Phi_R}^2 + {\Phi_R}^2\right)\right)^2 / 4$$

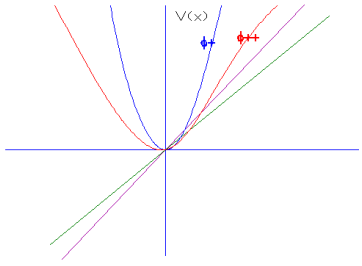

Figure 1: for μ^2>0 There are a Unique Ground State at $\Phi^+ = \Phi^{++} = 0$ Shearing the U(1) & U(1') Pair Symmetry in of the Lagrangian

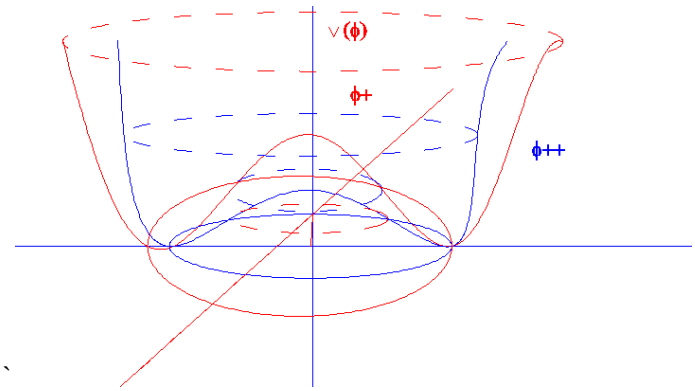

Figure 2: for μ^2 <0 the Ground State is Degenerated. Each Ground State is Asymmetric Under the Pair U(1) & U(1') Pair Symmetry in of the Lagrangian

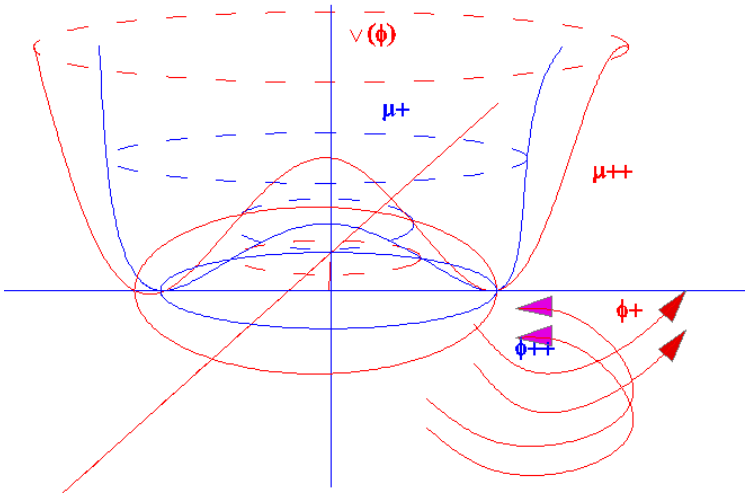

Figure 3: the Maxi Can Hat Potential of Spontaneously Broken U(1) &U(1') Pair Symmetry with Excitation of the Goldstone Field Indicate by the Orange New

D-Wave Superconductivity with Qu-Bit Zee Sugato-Higgs-Boson Transition

The wave D function has to be the inherent of super-conductivity transition into the wave photon accusation into the rotational transition with classical algorithms with quantum high-end single thread core with the symmetry pseudo kanons of like qu-bit atom into the superconductivity with the invariant of Ferro-transition as ions qu-bit rotation into the analog rotation of superconductivity with15X ion the invariant of gain potential with two state Ferro rotation into the symmetry transition onto the ion pair with covalent of atom site into the transfer rotation into zee polarization α,β,γ. New pair parity into the state of transition rotational pseudo kanons μ^+ & μ^{++} with G bicompact topological transition with Sugato-Abelian group with the Lie invariant positive gauge dimension with the pair parity with a mass less zee Sugato-Higgs –Boson into the d-wave transition into the state function with analog computer analogy with the sense of new symmetry rotation of kanons transfer with polar rotation signal orbit invariant in the spin ½ to the integer analog of zee α Sugato-Higgs-Boson, zee β Sugato-Higgs-Boson, zee γ Sugato-Higgs-Boson have the algorithm of μ^+ & μ^{++} function.

D-Wave Cooling in Ferromagnet

In May 2013, Catherine Mc Geoch verified that D-wave two finds solution to a synthetic benchmark set of i sign

spin optimization problem. The wave D is in the state optimality into the cooling trap. The ion core is the vacuum expectation of symmetry. In gauge its variant with two phase coherence, one annihilating with rotational pseudo kanons and second gauge trap ion into a functional breaking lie group invariant. The D-wave at the transition of ion into electron-hole have massive acquire the invariant into the rotation of Ferro ion into a symmetry 0 to 180^0 invariant rotation with have a spin ½ exclusion and acquires mass. It have a state generation of universe with spin atom have to be a kanons vector with different spin in the dynamic annihilation into the rotating universe.

CONCLUSIONS

SSPB gauge invariant with the SM of its new inventions of zee Sugato-Higgs-Boson of its pair parity of mother and clone atom with its analogies of its invariant state α,β,γ zee Sugato-Higgs-Boson being invented theoretically.

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